

SEQUENCE LISTING

<110> BASF Aktiengesellschaft

<120> Sucrose-6-phosphate phosphatase as target for
herbicides

<130> PF 53772

<150> DE 102 33 552.2

<151> 2002-07-23

<160> 19

<170> PatentIn Ver. 2.1

<210> 1

<211> 1278

<212> DNA

<213> Nicotiana tabacum

<220>

<221> CDS

<222> (1)..(1275)

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Arg Phe Asn Ala Leu Trp Glu Ala Asn Tyr Arg Asp Asn Ser Leu Leu	
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gtg ttc tca act ggg aga tca cct aca ctt tac aag gag ttg agg aaa	192
Val Phe Ser Thr Gly Arg Ser Pro Thr Leu Tyr Lys Glu Leu Arg Lys	
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Glu Lys Pro Met Leu Thr Pro Asp Ile Thr Ile Met Ser Val Gly Thr	
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gaa ata aca tat ggt aac tct gtg gtg cct gat gat ggt tgg gaa gct	288
Glu Ile Thr Tyr Gly Asn Ser Val Val Pro Asp Asp Gly Trp Glu Ala	
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ttt cta aat aac aag tgg gac aga aag ata gta aca gag gag act agc	336
Phe Leu Asn Asn Lys Trp Asp Arg Lys Ile Val Thr Glu Glu Thr Ser	
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Glu Lys Pro Met Leu Thr Pro Asp Ile Thr Ile Met Ser Val Gly Thr
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Phe Leu Asn Asn Lys Trp Asp Arg Lys Ile Val Thr Glu Glu Thr Ser
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 Lys Phe Pro Glu Leu Thr Leu Gln Ser Glu Thr Glu Gln Arg Pro His
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 Lys Val Ser Phe Tyr Val Gln Lys Asp Lys Ala Gln Asp Ile Met Lys
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 210 215 220
 Glu Glu Leu Leu Gln Trp His Ala Ala Asn Ala Lys Asn Asn Pro Lys
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 Gly His Ser Asn Leu Gly Pro Ser Thr Ser Pro Arg Asp Val Met Asp
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 Leu Ser Asp Cys Lys Met Glu Asn Phe Val Pro Ala Tyr Glu Val Val
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 325 330 335
 Thr Leu Phe Gly Thr Cys His Gly Asp Lys Gln Gly Lys Gln Phe Arg
 340 345 350
 Ile Trp Val Asp Gln Val Leu Pro Val Gln Val Gly Ser Asp Ser Trp
 355 360 365

Leu Val Ser Phe Lys Lys Trp Glu Leu Ser Gly Glu Asp Arg Arg Cys
 370 375 380

Cys Ile Thr Thr Val Leu Leu Ser Ser Lys Asn Lys Thr Val Ala Asp
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<222> (1)..(1275)

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Asp His Thr Met Val Asp His His Asp Pro Glu Asn Leu Ser Leu Leu	
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agg ttt aat gct tta tgg gag gcc aat tat cgt gaa aac tcc ttg tta	144
Arg Phe Asn Ala Leu Trp Glu Ala Asn Tyr Arg Glu Asn Ser Leu Leu	
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gtg ttc tca act ggg aga tca cct acc ctt tac aag gag ttg aga aaa	192
Val Phe Ser Thr Gly Arg Ser Pro Thr Leu Tyr Lys Glu Leu Arg Lys	
50 55 60	
gag aag ccc atg cta acc cca gat att acc att atg tct gtg ggg act	240
Glu Lys Pro Met Leu Thr Pro Asp Ile Thr Ile Met Ser Val Gly Thr	
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gaa ata act tat ggt aac tct atg gag cca gat gat ggt tgg gaa gca	288
Glu Ile Thr Tyr Gly Asn Ser Met Glu Pro Asp Asp Gly Trp Glu Ala	
85 90 95	
ttt tta aat gat aag tgg gat cgg aaa ata gtg aca gag gag aca agc	336
Phe Leu Asn Asp Lys Trp Asp Arg Lys Ile Val Thr Glu Glu Thr Ser	
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aaa ttt cct gaa ctc acc ctt cag tca gaa aca gag cag cga cca cac	384
Lys Phe Pro Glu Leu Thr Leu Gln Ser Glu Thr Glu Gln Arg Pro His	
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Thr Leu Ser Lys Arg Leu Glu Glu Arg Gly Leu Asp Val Lys Ile Ile	
145 150 155 160	
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Tyr Ser Gly Gly Met Asp Leu Asp Ile Leu Pro Gln Gly Ala Gly Lys	
165 170 175	
gga cga gca ctt gca tat ttg ctt aag aaa tta aag agt gag ggc aag	576
Gly Arg Ala Leu Ala Tyr Leu Leu Lys Lys Leu Lys Ser Glu Gly Lys	
180 185 190	
tta cca aac aac acg ctt gcc tgt ggt gac tct gga aat gat gct gag	624
Leu Pro Asn Asn Thr Leu Ala Cys Gly Asp Ser Gly Asn Asp Ala Glu	
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Val Ile His Ala Thr Glu Arg Cys Ala Ala Gly Ile Ile Gln Ala Ile	
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ggg cat ttc aac ctg gga cca aat acc tct cct aga gat gtt aca gat	816
Gly His Phe Asn Leu Gly Pro Asn Thr Ser Pro Arg Asp Val Thr Asp	
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Met Ser Asp Cys Lys Met Glu Asn Phe Val Pro Ala Tyr Glu Val Val	
275 280 285	
aaa ttt tac ttg ttt ttc gag aaa tgg agg cgt gga gaa att gag aat	912
Lys Phe Tyr Leu Phe Phe Glu Lys Trp Arg Arg Gly Glu Ile Glu Asn	
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<213> Nicotiana tabacum

<400> 4

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Asp His Thr Met Val Asp His His Asp Pro Glu Asn Leu Ser Leu Leu
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Arg Phe Asn Ala Leu Trp Glu Ala Asn Tyr Arg Glu Asn Ser Leu Leu
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Val Phe Ser Thr Gly Arg Ser Pro Thr Leu Tyr Lys Glu Leu Arg Lys
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Glu Lys Pro Met Leu Thr Pro Asp Ile Thr Ile Met Ser Val Gly Thr
 65 70 75 80

Glu Ile Thr Tyr Gly Asn Ser Met Glu Pro Asp Asp Gly Trp Glu Ala
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Phe Leu Asn Asp Lys Trp Asp Arg Lys Ile Val Thr Glu Glu Thr Ser
 100 105 110

Lys Phe Pro Glu Leu Thr Leu Gln Ser Glu Thr Glu Gln Arg Pro His
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 Lys Val Ser Phe Tyr Val Gln Lys Asp Lys Ala Gln Asp Ile Thr Gly
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 Tyr Ser Gly Gly Met Asp Leu Asp Ile Leu Pro Gln Gly Ala Gly Lys
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 Gly Arg Ala Leu Ala Tyr Leu Leu Lys Lys Leu Lys Ser Glu Gly Lys
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 Leu Phe Ser Ile Pro Asp Val Tyr Gly Val Met Val Ala Asn Ala Gln
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 Glu Glu Leu Leu Gln Trp Arg Ala Ala Asn Ala Lys Asp Ser Pro Lys
 225 230 235 240
 Val Ile His Ala Thr Glu Arg Cys Ala Ala Gly Ile Ile Gln Ala Ile
 245 250 255
 Gly His Phe Asn Leu Gly Pro Asn Thr Ser Pro Arg Asp Val Thr Asp
 260 265 270
 Met Ser Asp Cys Lys Met Glu Asn Phe Val Pro Ala Tyr Glu Val Val
 275 280 285
 Lys Phe Tyr Leu Phe Phe Glu Lys Trp Arg Arg Gly Glu Ile Glu Asn
 290 295 300
 Ser Asp Leu His Leu Ser Asn Leu Lys Ala Val Cys Arg Pro Ser Gly
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 Thr Phe Val His Pro Ser Gly Val Glu Lys Tyr Leu Glu Asp Cys Ile
 325 330 335
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 340 345 350
 Ile Trp Val Asp Leu Val Leu Pro Thr Gln Val Gly Ser Asp Ser Trp
 355 360 365
 Leu Val Ser Phe Lys Lys Trp Glu Leu Cys Gly Glu Glu Arg Gln Cys
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<213> Solanum tuberosum

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 Asp Leu Asp His Thr Met Val Asp His His Asp Ser Glu Asn Leu Ser
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 Arg Lys Glu Lys Pro Met Leu Thr Pro Asp Ile Thr Ile Met Ser Val
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gga act gaa ata aca tat ggt aac gct atg gtg cct gat gat ggt tgg 351
 Gly Thr Glu Ile Thr Tyr Gly Asn Ala Met Val Pro Asp Asp Gly Trp
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gaa aca ttt ctg aat aac aag tgg gat aga aag ata gta aca gag gag 399
 Glu Thr Phe Leu Asn Asn Lys Trp Asp Arg Lys Ile Val Thr Glu Glu
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10

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Gly Lys Gly Gln Ala Leu Ala Tyr Leu Leu Lys Lys Leu Lys Ser Glu	
175 180 185 190	
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Gly Lys Leu Pro Ser Asn Thr Leu Ala Cys Gly Asp Ser Gly Asn Asp	
195 200 205	
gct gaa tta ttc agt atc cca gat gtg tat ggt gta atg gta gct aat	735
Ala Glu Leu Phe Ser Ile Pro Asp Val Tyr Gly Val Met Val Ala Asn	
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Pro Lys Val Ile His Ala Ser Glu Arg Cys Ala Ala Gly Ile Ile Gln	
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Glu His Ser Glu His Tyr Leu Pro Asn Leu Lys Ala Val Cys Ile Pro	
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Ser Gly Thr Phe Val His Pro Ser Gly Val Glu Lys Ser Leu Gln Glu	
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11

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 370 375 380

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gat gca gca agt gac tcc gca acc tgg ttc ttt tagattgtca tctcagtgtgta 1364
 Asp Ala Ala Ser Asp Ser Ala Thr Trp Phe Phe
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<213> Solanum tuberosum

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Val Phe Ser Thr Gly Arg Ser Pro Thr Leu Tyr Lys Glu Leu Arg Lys
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Glu	Ile	Thr	Tyr	Gly	Asn	Ala	Met	Val	Pro	Asp	Asp	Gly	Trp	Glu	Thr	85	90	95	
Phe	Leu	Asn	Asn	Lys	Trp	Asp	Arg	Lys	Ile	Val	Thr	Glu	Glu	Thr	Ser	100	105	110	
Lys	Phe	Pro	Glu	Leu	Ser	Leu	Gln	Ser	Glu	Thr	Glu	Gln	Arg	Pro	His	115	120	125	
Lys	Val	Ser	Phe	Tyr	Val	Gln	Lys	Glu	Lys	Ala	Gln	Asp	Ile	Met	Lys	130	135	140	
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Gly	Gln	Ala	Leu	Ala	Tyr	Leu	Leu	Lys	Lys	Leu	Lys	Ser	Glu	Gly	Lys	180	185	190	
Leu	Pro	Ser	Asn	Thr	Leu	Ala	Cys	Gly	Asp	Ser	Gly	Asn	Asp	Ala	Glu	195	200	205	
Leu	Phe	Ser	Ile	Pro	Asp	Val	Tyr	Gly	Val	Met	Val	Ala	Asn	Ala	Gln	210	215	220	
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Leu	Ser	Asp	Cys	Lys	Met	Asp	Asn	Phe	Val	Pro	Ala	Tyr	Glu	Val	Val	275	280	285	
Lys	Phe	Tyr	Leu	Phe	Phe	Glu	Lys	Trp	Arg	Arg	Gly	Glu	Ile	Glu	His	290	295	300	
Ser	Glu	His	Tyr	Leu	Pro	Asn	Leu	Lys	Ala	Val	Cys	Ile	Pro	Ser	Gly	305	310	315	320
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13

Thr Ser Phe Gly Thr Cys His Ala Asp Lys Gln Gly Lys Gln Tyr Arg
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